

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Undergraduate Student Researchers Program

A grant program to fund minority institutions in support of undergraduate scholars in science, mathematics, engineering or computer science

Introduction

This NASA Announcement of Opportunity solicits proposals from Historically Black Colleges and Universities (HBCUs) and Other Minority Universities (OMUs) who currently participate in NASA's Undergraduate Student Researcher's Program (USAR). A list of institutions eligible to respond to the announcement is provided in Appendix A.

The intent of this solicitation is to develop through minority institutions a pool of talented scientists and engineers in fields related to NASA's mission. NASA's mission is to:

- ◆ Explore, use, and enable the development of space for human enterprise;
- ◆ Advance scientific knowledge and understanding of the Earth, the Solar System, and the Universe and to use the environment of space for research;
- ◆ Research, develop, verify, and transfer advanced aeronautics, space, and related technologies.

Program Summary

The program targets socially and economically disadvantaged students and/or students with disabilities; hereafter referred to as disadvantaged students. The goals of this program are:

- to attract disadvantaged students at the beginning of their undergraduate studies to career paths in areas of science or engineering relevant to NASA's mission;
- to retain these students in their field of study through the completion of the undergraduate degree;
- to increase the number of these students who pursue graduate degrees and research-related and/or teaching careers, and;
- to support the development of minority-serving institutions.

Eligible Institutions

Current USAR participants meeting one or more of the following criteria are eligible to be recipients of USAR awards for one new student for the 1996-1997 academic year.

- An accredited minority college or university with enrollment of a single underrepresented minority group or the combination of underrepresented minority groups that exceeds 50 percent of the total student enrollment as defined in the Higher Education Act as amended (See 20 USC 1135d-5 and 34 CFR 637.4[b]); **and/or**
- Designated by the Department of Education as an Hispanic-Serving Institution (HSI) under Title III of the Higher Education Act of 1965, as amended. (See 20 USC 1059 [c]); Public Law 102-325, Section 316, July 22, 1992); **and/or**
- An institution designated by the Department of Education as an Historically Black College and University under Title III of the Higher Education Act of 1965, as amended (See 34 CFR 608.2). (A list of eligible institutions is included in appendix A.)

Criteria for Student Selection

Universities may select students who meet the following criteria:

- U.S. citizen;
- Underrepresented minority or person with a disability, as defined in the preface of this announcement;
- Financial need demonstrated certified by the institution;
- Declared major in a NASA-related discipline (See list in Appendix B for eligible majors);
- Current high school senior or college freshman (no more than 38 semester hours completed by the end of spring semester 1995);
- Successful completion of college preparatory courses, including 4 years of mathematics and 3 years of science in high school;
- High school Grade Point Average (GPA) of at least 3.2/4.0 and combined Standard Aptitude Test (SAT) scores of 1000, or equivalent ACT or CEEB scores;
- If applicable, College GPA of at least 3.0/4.0 (B average);
- Full-time enrollment for academic year 1996-97.

Funding

Institutions may request up to \$12,000 per year per student (\$8,000 per year for tuition, room and board, books and fees; \$4,000 per student per year for summer research stipend, mentoring, and NASA-related travel, excluding foreign travel. **Any amount exceeding the award for a student's tuition, room, board and fees is the responsibility of the institution and/or the student.** NASA encourages institutions to supplement NASA funds in order to provide a comprehensive financial aid package that does not burden the student with loans.

Students selected by the institutions into this program may not transfer, for any reason, to another institution and continue to receive support through the USAR. The only exception will be students in a nationally recognized 3/2 engineering program. Students participating in the USAR can not concurrently hold another Federal fellowship or award (e.g. Federal Junior Fellowship, ROTC).

Duration

Initial awards shall be made for one academic year and may be renewed annually for three additional years of full-time study. Awards may be extended one year for students enrolled in nationally recognized or certified five-year undergraduate program. Renewals are contingent upon a student maintaining a cumulative 3.0 GPA (B average) and making satisfactory progress toward a degree in a NASA-related science, engineering, or mathematics field of study.

NASA Related Disciplines

NASA offers unparalleled opportunities for professional development and scholarship in engineering and science fields. NASA's specialty fields include:

- Space Sciences
- Life Sciences
- Materials and Structures
- Aeronautics
- Data Systems
- Earth Sciences
- Fluid and Flight Mechanics
- Propulsion and Power
- Measurement and Instrumentation Systems

The most opportunities for NASA research are for those students with major study in:

- Aerospace Engineering
- Electrical Engineering
- Mechanical Engineering
- Computer Science
- Aeronautical Engineering
- Electronic Engineering
- Physical Sciences
- Mathematics

Student Research Experiences

- **Summer Research**

Students are required to conduct summer research relevant to their field of study. It is the responsibility of each principal investigator to work in cooperation with the faculty advisors and, when appropriate, with NASA personnel to secure summer research positions for students. Freshmen research experiences are ordinarily at the student's university or another institution of higher education. However, the research experience for any USAR student may take place at a NASA installation, a Federal laboratory, or the aerospace industry. NASA research has priority over any other offer a student receives.

- **Cooperative Education Experiences**

Students are encouraged to participate in NASA's cooperative education program. Institutions are required to establish a cooperative education agreement with a NASA installation(s) of their choice. Co-op experiences can replace summer research positions.

Obligation to the Government

Students who receive support under a NASA training grant do not incur any formal obligation to the Government of the United States. However, one objective of this program will be served if the students who participate in this program become part of the pool from which NASA draws its workforce.

Institutional Commitment

Participating institutions agree to:

- Designate one principal investigator (PI) to implement and manage the program.
- Establish a cooperative education agreement with a NASA installation or the Jet Propulsion Laboratory.
- Appoint a faculty advisor for each student, to serve as his/her mentor. The principal investigator may also serve as the faculty advisor.
- Ensure development of the total student.

Reports

- Submit a completed Student Information Data Form for each new student by September 15, 1996.
- No later than June 15 of each year the Grantee will submit a report to the Office of Equal Opportunity Programs which will also serve as a renewal proposal. The report will include:
 - University personnel associated with the program, including student's mentor
 - GPA (include copy of transcript)
 - Student enhancements
 - Report from the student's mentor
 - Student travel and/or participation in professional activities
 - Location and focus of summer experience, including a one-page summary by the student
 - Cooperative Education Agreements with NASA Installations or Jet Propulsion Laboratory
 - Problem areas and recommended solutions (action plan for students whose GPA falls below 3.0)
 - Identification of drop outs with explanation
 - Recommendation for continuation of award with **original signature** of the principal investigator
 - Budget request
 - Drug-free workplace, debarment and lobbying certifications

Instructions to Eligible Institutions

- 1) Complete Budget Request Form and Budget Narrative(s) for up to two underrepresented minority and/or disabled students provided in Appendix C.
- 2) Submit a two-page recruitment, selection, and retention plan for USAR students. (Upon notification of award, the university must submit the student data information sheet no later than September 15, 1996.)
- 3) Complete the attached drug-free workplace, debarment and lobbying certification. (Appendix D)
- 4) Forward the plan, budget request sheet, and certification by June 15, 1996 to

Ms. Millie Mateu
NASA Headquarters, Code EU
300 E Street, SW
Washington, DC 20546

Phone: (202) 358-0954
TDD: (202) 358-3748

Materials must be **received** no later than June 15, 1996. **No faxes will be accepted. Unsigned, incomplete and late proposal will not be accepted.** Award announcements will be made in July, 1996.

Appendix A

USAR UNIVERSITY CONTACTS

The following persons have agreed to serve as contacts for the USAR. Students should contact these persons directly to discuss participation in the program.

California State University Los Angeles Mr. Milton Randle 5151 State University Drive Los Angeles, CA 90032-8150 (213) 343-4527	Florida A&M University Dr. Samuels Director, Office of Engineering and Science Support PO Box 338 Tallahassee, FL 32307 (904) 561-2135
City College of New York Dr. Charles Watkins 138th and Convent Avenue New York, NY 10031 (212) 650-5439	Florida International University Dr. Jainendra Navlakha, Professor School of Computer Science University Park Miami, FL 33199 (305) 348-2744
D-Q University Ms. Shirley Lewis Vice President of Student Services PO Box 409 Davis, CA 95617 (916) 758-0470	Gallaudet University Mr. Gerald McGaughran EPOC, Ely Center 800 Florida Avenue NE Washington, DC 20002 (202) 651-5240
Fayetteville State University Dr. Leo Edwards, Jr. 1200 Murchison Road Fayetteville, NC 28301 (910) 486-1669	Morehouse College Mr. Andre Pattilo Admissions Office 830 Westview Drive SW Atlanta, GA 30314 (404) 215-2633
Fiorella H LaGuardia Community College Dr. Roy McLeod 31-10 Thomson Ave. Long Island City, NY 11101-9976 (718) 482-5057	Morgan State University Dr. Eugene DeLoatch School of Engineering Coldspring Land and Hillen Road Baltimore, MD 21239 (410) 319-3231

Appendix A, continued

USAR UNIVERSITY CONTACTS

The following persons have agreed to serve as contacts for the USAR. Students should contact these persons directly to discuss participation in the program.

New Mexico Highlands University Dr. Bill Taylor Department of Engineering Las Vegas, NM 87701 (505) 454-3360	Tennessee State University Dr. Decatur Rogers Dean, College of Engineering and Technology 3500 John A. Merritt Blvd. Nashville, TN 37209-1561 (615) 963-5401
New Mexico State University Ms. Pat Hynes Box 30001 Department SG Las Cruces, NM 88003-0001 (505) 646-6414	University of Maryland Eastern Shore Dr. Brenda Anderson Princess Anne, MD 21853-1299 (410) 651-6083
North Carolina A&T State University Dr. Lonnie Sharpe, Jr. Assistant Dean, School of Engineering 651 McNair Hall 1601 East Market Street Greensboro, NC 27411 (910) 334-7589	University of New Mexico Mr. Michael Lee Program Director, NASA Training Project Engineering Annex Room 114 Albuquerque, NM 87131 (505) 277-5997
Pembroke State University Ms. Deborah Basket Office of Admissions PO Box 1510 Pembroke, NC 28372 (910) 521-6263	University of Texas El Paso Mr. Manuel Pacillas Office, Dean of Engineering El Paso, TX 79968 (915) 747-6606
Shaw University Dr. McLouis Clayton 118 East South Street Raleigh, NC 27611 (919) 546-8330	University of Texas, Pan American Dr. William Shockley, Jr. Physics & Geology Department PS 148 1201 W University Drive Edinburg, TX 78539 (210) 381-3532
Southern University and A&M College Dr. Diola Bagayoko Associate Professor of Physics PO Box 11776 Baton Rouge, LA 70813 (504) 771-2730	University of Texas, San Antonio Dr. Lawrence Williams College of Science and Engineering San Antonio, TX 78249-0661 (512) 691-4449
Spelman College Dr. Etta Falconer Box 1005 Atlanta, GA 30314 (404) 223-7634	Winston-Salem State University Dr. Wilveria Atkinson 601 ML King Jr. Drive Winston-Salem, NC 27110 (910) 750-2600

DISCIPLINE (MAJOR) CODES

PHYSICAL SCIENCES

- 11 Astronomy
- 12 Chemistry
- 13 Physics

MATH/COMPUTERS

- 21 Mathematics
- 22 Computer Sciences

ENGINEERING

- 41 Aeronautical
- 42 Astronautical
- 43 Chemical
- 44 Civil
- 45 Electrical
- 46 Mechanical
- 47 Metallurgy and materials

ENVIRONMENTAL SCIENCES

- 31 Atmospheric Sciences
- 32 Geological Sciences
- 39 Environmental Sciences

LIFE SCIENCES

- 51 Biological Sciences
- 54 Environmental Biology
- 55 Agricultural Sciences
- 56 Medical Sciences
- 59 Life Sciences

Appendix C

USAR BUDGET NARRATIVE 1995-96

I. Basic Award:

Tuition*	_____
Room & Board	_____
Books	_____
Fees	_____
SUBTOTAL:	\$ _____

*Additional stipend for summer or
academic year research experience _____

TOTAL: \$ _____

BASIC AWARD TOTAL: \$ _____

(Maximum of \$8,000 per student)

II. Student Allowance \$ _____
(Maximum of \$2,000 per student)

III. University Allowance \$ _____
(Maximum of \$2,000 per student)

TOTAL REQUEST: \$ _____

(Maximum of \$12,000 per student)

*If tuition, etc. amount to less than \$8000, funds may be requested for additional stipends for summer and academic year research. Please attach a statement justifying the request.

CERTIFICATIONS REGARDING LOBBYING; DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS, AND DRUG-FREE WORKPLACE REQUIREMENTS

Applicants should refer to the regulations cited below to determine the certification to which they are required to attest. Applicants should also review the Instructions for certification included in the regulations before completing this form. Signature of this form provides for compliance with certification requirements under 34 CFR Part 82, "New Restrictions on Lobbying," and 34 CFR Part 85, "Government-Wide Debarment and Suspension (Non-procurement) and Government-Wide Requirements for Drug-Free Workplace (Grants)." The certifications shall be treated as a material representation of fact upon which reliance will be placed when the Department of Education determines to award the covered transaction, grant, or cooperative agreement.

1) LOBBYING

As required by Section 1352, Title 31 of the U.S. Code, and implemented at 34 CFR Part 82, for persons entering into a grant or cooperative agreement over \$100,000, as defined at 34 CFR Part 82, Sections 82.105, and 82.110, the applicant certifies that:

- (a) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the making of any Federal grant, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal grant or cooperative agreement;
- (b) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal grant or cooperative agreement, the undersigned shall complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions;
- (c) The undersigned shall require that the language of this certification be included in the award documents for all sub-award at all tiers (including sub-grants, contracts under grants and cooperative agreements, and subcontracts) and that all sub-recipients shall certify and disclose accordingly.

2) DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS

As required by Executive Order 12549, Debarment and Suspension, and implemented at 34 CFR Part 85, for prospective participants in primary covered transactions, as defined at 34 CFR Part 85, Sections 85.105 and 85.100 --

A. The applicant certifies that it and its principals:

- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- (b) Have not within a three-year period preceding this application been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
- (d) Have not within a three-year period preceding this application had one or more public transactions (Federal, State, or local) terminated for cause or default; and

B. Where the applicant is unable to certify to any of the statements in this certification, he or she shall attach an explanation to this application.

3) DRUG FREE WORKPLACE (GRANTEES OTHER THAN INDIVIDUALS)

As required by the Drug-Free Workplace Act of 1988, and implemented at 34 CFR Part 85, Subpart F, for grantees, as defined at 34 CFR Part 85, Sections 85.605 and 85.610 --

A. The applicant certifies that it will or will continue to provide a drug-free workplace by:

- (a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;
- (b) Establishing an on-going drug-free awareness program to inform employees about--
 - (1) The dangers of drug abuse in the workplace;
 - (2) The grantee's policy of maintaining a drug-free workplace;
 - (3) Any available drug counseling, rehabilitation, and employee assistance programs; and
 - (4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;
- (c) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (a);

(d) Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will--

- (1) Abide by the terms of the statement; and
 - (2) Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction;
 - (e) Notifying the agency, in writing, within 10 calendar days after receiving notice under subparagraph (d)(2) from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title, to: Director, Grants and Contracts Service, U.S. Department of Education, 400 Maryland Avenue, S.W.(Room 3124, GSA Regional Office, Building No. 3), Washington, DC 20202-4571. Notice shall include the identification number(s) of each affected grant;
 - (f) Taking one of the following actions, within 30 calendar days of receiving notice under subparagraph (d)(2), with respect to any employee who is so convicted--
 - (1) Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or
 - (2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency.
 - (g) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (a), (b), (c), (d), (e), and (f).
- B. The grantee may insert in the space provided below the site(s) for the performance of work done in connection with the specific grant:

Place of Performance (Street address, city, county, state, zip code)

Check () if there are workplaces on file that are not identified here.

DRUG FREE WORKPLACE

(grantees who are individuals)

As required by the Drug-Free Workplace Act of 1988, and implemented at 34 CFR Part 85, Subpart F, for grantees, as defined at 34 CFR Part 85, Sections 85.605 and 85.610 --

- A. As a condition of the grant, I certify that I will not engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance in conducting any activity with the grant; and
- B. If convicted of a criminal drug offense resulting from a violation occurring during the conduct of any grant activity, I will report the conviction, in writing, within 10 calendar days of the conviction, to: Director, Grants and Contracts Service, U.S. Department of Education, 400 Maryland Avenue, S.W. (Room 3124, GSA Regional Office Building No. 3), Washington, DC 20202-4571. Notice shall include the identification number(s) of each affected grant.

As the duly authorized representative of the applicant, I hereby certify that the applicant will comply with the above certifications.

NAME OF APPLICANT:

PR/AWARD NUMBER AND/OR PROJECT NAME

PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

Signature

DATE

ED80-0013

Appendix E

NASA INSTALLATION AND JET PROPULSION LABORATORY MINORITY UNIVERSITY PROGRAM CONTACTS

<p>Mr. Aaron Hatch Ames Research Center Mail Code 223-3 Moffett Field, CA 94035 (415) 604-0790 FAX (415) 604-3869</p>	<p>Mr. J. Albert Diggs Kennedy Space Center Mail Code EO Kennedy Space Center, FL 32899 (407) 867-2307 FAX (407) 867-1066</p>
<p>Dr. Gerald Soffen Goddard Space Flight Center Mail Code 160 Greenbelt, MD 20771 (301) 286-9690 FAX (301) 286-1610</p>	<p>Dr. Samuel E. Massenberg Langley Research Center Mail Code 400 Hampton, VA 23665 (804) 864-5800 FAX (804) 864-6521</p>
<p>Mr. Dillard Menchan Goddard Space Flight Center Mail Code 120 Greenbelt, MD 20771 (301) 286-7348 FAX (301) 286-1712</p>	<p>Dr. Julian Earls Lewis Research Center Mail Stop 0100 21000 Brookpark Road Cleveland, OH 44135 (216) 433-3014 FAX (216) 433-5749 For HBCUs</p>
<p>Mr. Alfred Paiz Jet Propulsion Laboratory Mail Code 183-900 4800 Oak Grove Drive Pasadena, CA 91109 (818) 354-3014 FAX (818) 393-4977</p>	<p>Mr. Jo Anne Charleston Lewis Research Center Mail Stop MS 3-16 21000 Brookpark Road Cleveland, OH 44135 (216) 433-2921 FAX (216) 433-3344 For OMUs</p>
<p>Dr. Joseph D. Atkinson Johnson Space Center Mail Code AJ111 Houston, TX 77058 (713) 483-4831 FAX (713) 483-0609</p>	<p>Mr. Willie Love Marshall Space Flight Center Mail Code CE01 MSFC, AL 35812 (205) 544-0944 FAX (205) 544-2411 For OMUs</p>
<p>Dr. Armond Joyce Stennis Space Center Mail Code MAOO Stennis Space Center, MS 39529-6000 (601) 688-3830 FAX (601) 688-7499</p>	<p>Ms. Elsie McGowen Dryden Flight Research Facility P.O. Box 273 Edwards, CA 93523 (805) 258-3760 FAX (805) 258-3567</p>